

PATENT

IN THE CLAIMS:

Kindly amend the claims as follows:

1. (Previously Presented) A trailer comprising:

an articulated frame having at least a pair of transversely opposed wheels rotatable about an axis of rotation, said articulated frame including a tilt frame pivotable about a tilt pivot axis and a draft tongue pivotally connected to said tilt frame for pivotal movement about an articulation axis located forwardly of said tilt pivot axis; and

a bed frame supported on said articulated frame for selective pivotal movement relative to said articulated frame about a dump pivot axis oriented rearwardly of said tilt pivot axis, said bed frame being selectively movable with said tilt frame about said tilt pivot axis.

2. (Original Claim) The trailer of claim 1 wherein said bed frame is also connected to said articulated frame by a connection apparatus positioned forwardly of said tilt pivot axis to restrict pivotal movement of said bed frame relative to said tilt frame, said articulated frame including a locking device selectively coupling said tilt frame to said draft tongue to restrict pivotal movement of said tongue relative to said tilt frame about said articulation axis.

3. (Original Claim) The trailer of claim 2 wherein said bed frame moves vertically relative to said draft tongue when pivoting about said tilt axis and when pivoting about said dump axis, said tilt frame moving vertically relative to said draft tongue only when said bed frame pivots about said tilt axis.

4. (Original Claim) The trailer of claim 3 further comprising:

an actuator mechanism supported on said tongue and coupled to said bed frame to power the pivotal movement of said bed frame about at least one of said dump pivot axis and said tilt pivot axis.

PATENT

5. (Original Claim) The trailer of claim 4 wherein said actuator mechanism comprises:
a mounting bracket affixed to said tongue;
a linear actuator supported on said mounting bracket; and
a yoke connected to said actuator for vertical movement thereof in response to a corresponding linear movement of said actuator, said yoke being pivotally connected to said bed frame to cause vertical movement thereof in response to said linear movement of said actuator.
6. (Original Claim) The trailer of claim 5 wherein said actuator is pivotally connected to said mounting bracket for pivot movement about a generally horizontal actuator pivot axis positioned in general transverse alignment with a yoke pivot axis defined by the pivotal connection of said yoke with said bed frame, such that said actuator is pivotally movable between an upright operative position and a lowered inoperative position oriented generally parallel to said draft tongue.
7. (Original Claim) The trailer of claim 6 wherein said actuator is pivotally connected to said mounting bracket by a pivot pin located at a position vertically spaced from said actuator pivot axis.
8. (Original Claim) The trailer of claim 6 wherein said actuator is pivotally connected to said mounting bracket by a pivot pin, said pivot pin defining said actuator pivot axis.
9. (Original Claim) The trailer of claim 6 wherein said bed frame is positioned above said tilt frame, said dump pivot axis being defined by a pivot mechanism connecting said bed frame to said tilt frame, said pivot mechanism including a pair of laterally opposing support members pivotally supported in a rear frame member of said tilt frame.
10. (Original Claim) The trailer of claim 9 wherein said actuator is operatively associated with a latch mechanism for controlling the pivotal movement thereof between said upright operative position and said lowered inoperative position.

PATENT

11. (Original Claim) The trailer of claim 10 wherein said actuator is oriented below a top surface of a load bed supported on said bed frame when placed into said lowered inoperative position.

12. (Original Claim) The trailer of claim 10 wherein said actuator has an internal reservoir for hydraulic fluid, said actuator being provided with a manually operable hand pump to effect extension of said hydraulic actuator.

13. (Original Claim) The trailer of claim 12 wherein said actuator includes a connection device for connection to a remote supply of hydraulic power.

14. (Original Claim) An actuating mechanism for use with a frame and a load bed pivotally movable about a pivot axis relative to said frame, comprising:

a mounting bracket affixed to said frame;

a linear actuator pivotally supported on said mounting bracket for pivot movement about a generally horizontal actuator pivot axis; and

a yoke connected to said actuator and pivotally connected to said load bed by a pivot mechanism defining a yoke pivot axis to effect vertical movement of said load bed in response to a corresponding linear movement of said actuator.

15. (Original Claim) The actuating mechanism of claim 14 wherein said actuator pivot axis is positioned in general transverse alignment with said yoke pivot axis so that said actuator is pivotally movable between an upright operative position and a lowered inoperative position.

16. (Original Claim) The actuating mechanism of claim 15 wherein said actuator is pivotally connected to said mounting bracket by a pivot pin located at a position vertically spaced from said actuator pivot axis.

17. (Original Claim) The actuating mechanism of claim 15 wherein said actuator is pivotally connected to said mounting bracket by a pivot pin, said pivot pin defining said actuator pivot axis.

PATENT

18. (Original Claim) The actuating mechanism of claim 17 wherein said actuator is a screw jack being extensible through manual manipulation of a crank handle.

19. (Original Claim) The actuating mechanism of claim 18 wherein said actuator further comprises:

an outer casing;

a telescopic section extensible from said outer casing upon appropriate manipulation of said crank handle; and

a bottom tip member slidably extensible from said telescopic section, said bottom tip being detachably connected to said telescopic section by a locking device such that a release of said locking device permits said telescopic section to freely slide on said bottom tip member to enable said load bed to move vertically through the application of forces other than through said actuator.

20. (Original Claim) The actuating mechanism of claim 15 wherein said frame corresponds to a trailer having a draft tongue pivotally connected to said frame for movement about an articulation axis, said load bed being pivotally connected to said frame at a dump pivot axis located rearwardly of said articulation axis, said actuator causing an articulation between said draft tongue and said frame thereby effecting a pivotal movement of said load bed about a tilt pivot axis located between said articulation axis and said dump pivot axis.

21. (Original Claim) The actuating mechanism of claim 20 wherein said actuator is operatively associated with a latch mechanism for controlling the pivotal movement thereof between said upright operative position and said lowered inoperative position, said lowered inoperative position being positioned below a top surface of said load bed.

22. (Original Claim) The actuating mechanism of claim 21 wherein said actuator has an internal reservoir for hydraulic fluid, said actuator being provided with a manually operable hand pump to effect extension of said hydraulic actuator.

PATENT

23. (Original Claim) The actuating mechanism of claim 22 wherein said actuator includes a connection device for connection to a remote supply of hydraulic power.
24. (Original Claim) The actuating mechanism of claim 14 wherein said actuator mechanism includes a hydraulic cylinder.
25. (Original Claim) An apparatus comprising:
a frame supported above the ground by a pair of wheels rotatable about an axis of rotation;
a load bed pivotally connected to said frame for vertical movement relative thereto; and
an actuator mechanism positioned forwardly of said load bed and being pivotally supported on said frame at an actuator pivot axis, said actuator mechanism including a yoke pivotally connected to said load bed for movement relative thereto about a yoke pivot axis oriented in substantial alignment with said actuator pivot axis.
26. (Original Claim) The apparatus of claim 25 wherein said load bed includes a first stop apparatus positioned to restrict rearward pivotal movement of said actuator and a frame supported second stop apparatus positioned to restrict forward pivot movement of said actuator.
27. (Original Claim) The apparatus of claim 26 wherein said second stop apparatus is a latch mechanism that can be selectively operated to allow said actuator mechanism to pivotally move forwardly from an upright operative position to a lowered inoperative position.
28. (Original Claim) The apparatus of claim 27 wherein said actuator mechanism includes a screw jack being extensible through manual manipulation of a crank handle.
29. (Original Claim) The apparatus of claim 28 wherein said screw jack comprises:
an outer casing;
a telescopic section extensible from said outer casing upon appropriate manipulation of said crank handle; and

PATENT

a bottom tip member slidably extensible from said telescopic section, said bottom tip being detachably connected to said telescopic section by a locking device such that a release of said locking device permits said telescopic section to freely slide on said bottom tip member to enable said load bed to move vertically through the application of forces other than through said crank handle.

30. (Original Claim) The apparatus of claim 27 wherein said actuator mechanism includes a hydraulic actuator having an internal reservoir for hydraulic fluid, said hydraulic actuator being provided with a manually operable hand pump to effect extension of said hydraulic actuator.

31. (Original Claim) The apparatus of claim 30 wherein said hydraulic actuator includes a connection device for connection to a remote supply of hydraulic power.

32. (Original Claim) The apparatus of claim 26 wherein said actuator mechanism includes a hydraulic cylinder.

33. (Original Claim) The apparatus of claim 32 wherein said hydraulic cylinder includes a connection device for connection to a remote supply of hydraulic power.

34. (Previously Presented) The apparatus of claim 27 further comprising:

a draft tongue pivotally connected to said frame for articulation about an articulation axis positioned forwardly of said axis of rotation;

said load bed being pivotally mounted on said frame for generally vertical movement relative thereto about a dump pivot axis located rearwardly of said axis of rotation, said frame being pivotable about a tilt pivot axis located between said articulation axis and said dump pivot axis;

a first connection device interconnecting said load bed and said frame to control the pivotal movement of said load bed relative to said frame, a disengagement of said first connection device permitting said load bed to pivot about said dump pivot axis; and

a second connection device interconnecting said frame and said tongue to control the articulation of said frame relative to said tongue, a disengagement of said second connection

PATENT

device with the engagement of said first connection device permitting said load bed to pivot with said frame about said tilt pivot axis while said tongue articulates relative to said frame about said articulation axis.

35. (Original Claim) The trailer of claim 34 wherein said tilt pivot axis coincides with said axis of rotation, said actuator mechanism being supported on said tongue and coupled to said load bed to power the pivotal movement of said load bed about at least one of said dump pivot axis and said axis of rotation.

36. (Original Claim) The trailer of claim 35 wherein said actuator mechanism comprises:
a mounting bracket affixed to said tongue;
a linear actuator supported on said mounting bracket; and
a yoke connected to said linear actuator to effect vertical movement thereof in response to a corresponding movement of said linear actuator, said yoke being pivotally connected to said load bed to cause vertical movement thereof.

37. (Original Claim) An actuating mechanism for use between a frame and a movable member pivotally connected to said frame to effect pivotal movement of said movable member relative to said frame, comprising:

a linear actuator supported on said frame and including a housing defining a first end of said linear actuator and an extensible member defining a second end of said linear actuator, said extensible member being linearly movable from an operative portion of said housing spaced from said first end; and

a yoke connected to said linear actuator at a connection point and having arms pivotally connected to said movable member along a yoke pivot axis to effect vertical movement of said movable member relative to said frame in response to a corresponding linear movement of said extensible member, said yoke pivot axis being located such that said operative portion is located between said connection point and said yoke pivot axis when said linear actuator is fully retracted with said first and second ends spaced at a minimum distance.

PATENT

38. (Original Claim) The actuating mechanism of claim 37 wherein one of said first and second ends is pivotally connected to said frame to define an actuator pivot, said yoke pivot axis being aligned with actuator pivot when said linear actuator is in a completely collapsed condition with said first end at a minimum distance from said second end to permit said linear actuator and said yoke to be pivotable about said actuator pivot and said yoke pivot axis to move between an upright operative position to a lowered inoperative position.

39. (Original Claim) The actuating mechanism of claim 38 further comprising a latch mechanism for controlling the pivotal movement of said linear actuator and said yoke between said upright operative position and said lowered inoperative position.

40. (Original Claim) The actuating mechanism of claim 39 wherein said movable member corresponds to a load bed of a trailer and said frame corresponds to a draft tongue of said trailer, said linear actuator and said yoke being positionable below said load bed when placed into said lowered inoperative position.

41. (Original Claim) The actuating mechanism of claim 40 wherein said yoke is affixed to said housing, said arms extending past said operative portion to align with a remote end of said extensible member.

42. (Original Claim) The actuating mechanism of claim 40 wherein said yoke is affixed to said extensible member.

43. (Currently Amended) A trailer comprising:

a main frame having at least a pair of transversely opposed wheels rotatable about an axis of rotation, said main frame including a tilt frame pivotable about a tilt pivot axis and a draft tongue, said tilt frame being pivotally movable relative to said draft tongue;

a bed frame including a forwardmost transverse frame member, said bed frame being supported on said main frame for selective pivotal movement relative to said tilt frame about a dump pivot axis oriented rearwardly of said tilt pivot axis, said bed frame further being selectively movable with said tilt frame relative to said draft tongue about said tilt pivot axis;

PATENT

a locking mechanism cooperatively associated with said bed frame, said tilt frame and said draft tongue for selectively permitting said bed frame to pivot respectively relative to said dump pivot axis and relative to said tilt pivot axis; and

an actuator interconnecting both said draft tongue and said bed frame forwardly of said forwardmost transverse frame member to effect pivotal movement of said bed frame.

44. (Previously Presented) The trailer of Claim 43, wherein said locking mechanism is positioned forwardly of said tilt pivot axis and includes a first member interconnecting said bed frame and said tilt frame to restrict pivotal movement therebetween and a second member interconnecting said tilt frame and said draft tongue to control relative pivotal movement between said tilt frame and said draft tongue.

45. (Previously Presented) The trailer of Claim 44, wherein said bed frame moves vertically with said tilt frame relative to said draft tongue when pivoting about said tilt axis and vertically relative to said tilt frame and said draft tongue pivoting about said dump axis.

46. (Previously Presented) The trailer of Claim 45, wherein said actuator mechanism is pivotally mounted on said draft tongue and movable between a reclined inoperative transport position generally parallel to said draft tongue and an upright operative position to power the pivotal movement of said bed frame.